CONTENTS OF VOLUME 20

Number 1 — February 1990

	Instructions to Contributors	i
	Parasitological Calendar	1
	Parasitological Societies of the World	3
M. INAGAKI and H. TANAKA	Centenary Biographical Note: Kanji Nagano 1889–1971	9
Invited Review Article		
S. A. NADLER	Molecular approaches to studying helminth population genetics and phylogeny	11
General Papers		
T. GARATE, W. HARNETT and R. M. E. PARKHOUSE	Cloning of a species-specific DNA probe from *Onchocerca gibsoni*	31
M. H. EL KOUNI and F. N. M. NAGUIB	Pyrimidine salvage pathways in adult *Schistosoma mansoni*	37
I. D. WHITTINGTON	The egg bundles of the monogenean *Dionchus remorae* and their attachment to the gills of the remora, *Echeneis naucrates*	45
S. A. FERENC, V. STOPINSKI and C. H. COURTNEY	The development of an enzyme-linked immunosorbent assay for *Trypanosoma vivax* and its use in a seroepidemiological survey of the Eastern Caribbean Basin	51
Y. SATO and H. TOMA	*Strongyloides venezuelensis* infections in mice	57
Y. SATO and H. TOMA	Effects of spleen cells and serum on transfer of immunity to *Strongyloides venezuelensis* infection in hypothymic (nude) mice	63
J. M. UPSTON and A. M. GERO	Increased glucose permeability in *Babesia bovis*-infected erythrocytes	69
M. STANKIEWICZ and E. L. JESKA	Evaluation of pyrantel-tartrate abbreviated *Ascaris suum* infections for the development of resistance in young pigs against migrating larvae	77
M. LIANCE, S. BRESSON-HADNI, D. VUITTON, S. BRETAGNE and R. HOUIN	Comparison of the viability and developmental characteristics of *Echinococcus multilocularis* isolates from human patients in France	83
D. J. MCGILLIVERY, W. K. YONG, G. G. RIFFKIN and B. ADLER	The distribution and localization of the stage-specific GP31 antigen from infective *Ostertagia circumcincta* larvae	87
A. W. SHOSTAK and G. W. ESCH	Temperature effects on survival and excystment of cercariae of *Halipegus occidualis* (Trematoda)	95
E. T. VALTONEN, M. PROST and R. RAHKONEN	Seasonality of two gill monogeneans from two freshwater fish from an oligotrophic lake in Northeast Finland	101

P. KHAN, W. A. NIZAMI, M. AHMAD and S. M. A. ABIDI	Biochemical variations in *Gigantocotyle explanatum* and *Gastrothylax crumenifer* with respect to their seasonal reproduction	109
Research Notes		
M. NOVAK	Efficacy of Mitomycin C against alveolar *Echinococcus*	119
P. C. FAN, W. C. CHUNG, C. Y. LIN and C. C. WU	Experimental infection of Thailand *Taenia* (Chiengmai strain) in domestic animals	121
B. FRIED and K. R. SOUSA	Single- and five-worm infections of *Echinostoma caproni* (Trematoda) in the ICR mouse	125
G. THEODOROPOULOS and J. H. THEIS	Change in the isoenzyme composition of acid phosphatase in murine peritoneal macrophages exposed to or infected with *Trypanosoma cruzi*	127
M. NISHINA, E. HORI, K. MATSUSHITA, M. TAKAHASHI, K. KATO and A. OHSAKA	Application of ^{15}N-nuclear magnetic resonance (N.M.R.) spectroscopy for the study of nitrogen metabolism of a parasite: transamination in *Angiostrongylus cantonensis* eggs	131
Book Review		
D. J. JENKINS	*Hydatidosis: Veterinary Perspectives and Annotated Bibliography*. Edited by R. C. A. Thompson and C. E. Allsop	133
Meeting Report	American Association of Veterinary Parasitologists Conference, Orlando, Florida, 16 18 July 1989	135

Number 2		April 1990
	Instructions to Contributors	i
	Parasitological Calendar	137
V. G. EVRANOVA	Centenary Biographical Note: Nikolai Petrovich Popov 1888–1961	139
General Papers		
A. M. JOHNSON, R. FIELKE, R. LUMB and P. R. BAVERSTOCK	Phylogenetic relationships of *Cryptosporidium* determined by ribosomal RNA sequence comparison	141
M. J. MUTINGA and O. O. DIPEOLU	Saurian malaria in Kenya: epidemiological features of malarial infections in lizard populations of the West Pokot District	149
D. J. D. BANKS, R. SINGH, I. A. BARGER, B. PRATAP and L. F. LE JAMBRE	Development and survival of infective larvae of *Haemonchus contortus* and *Trichostrongylus colubriformis* on pasture in a tropical environment	155
A. ENOS and G. C. COLES	Effect of benzimidazole drugs on tubulin in benzimidazole resistant and susceptible strains of *Caenorhabditis elegans*	161
V. M. BOWLES, J. P. FEEHAN and R. M. SANDEMAN	Sheep plasma protease inhibitors influencing protease activity and growth of *Lucilia cuprina* larvae *in vitro*	169
J. M. FISHER and K. A. DAVIES	On size and moulting of *Aphelenchus avenae* (Nematoda: Aphelenchida)	175

G. S. Allan and D. A. Wharton	Anhydrobiosis in the infective juveniles of *Trichostrongylus colubriformis* (Nematoda: Trichostrongylidae)	183
J-R. Pages and A. Théron	Analysis and comparison of cercarial emergence rhythms of *Schistosoma haematobium, S. intercalatum, S. bovis,* and their hybrid progeny	193
J. de J. Ramírez-Córdova, S. Ramírez-Romo and J. Mora-Galindo	Quantitative evaluation of intracellular degradation in *Entamoeba invadens*	199
M. M. El-Naggar, A. A. Khidr and G. C. Kearn	Ultrastructural observations on the oviduct, Mehlis' glands and ootype of the monogenean *Cichlidogyrus halli typicus* (Price & Kirk, 1967) Paperna, 1979	203
G. A. Butcher	*In vitro* responses of human peripheral blood mononuclear cells to *Plasmodium falciparum* antigen	211
S. Mukerjee, R. Chander, B. L. Tekwani, S. Gupta, J. C. Katiyar, O. P. Shukla and N. K. Kapoor	Molecular basis of hyperlipidemia in golden hamsters during experimental infection with *Ancylostoma ceylanicum* (Nematoda: Strongylidae)	217
S. S. J. Montgomery and W. I. Montgomery	Structure, stability and species interactions in helminth communities of wood mice, *Apodemus sylvaticus*	225
D. P. Knox and D. G. Jones	Studies on the presence and release of proteolytic enzymes (proteinases) in gastro-intestinal nematodes of ruminants	243
J. C. W. Comley and C. H. Turner	Potential of a soluble tetrazolium/formazan assay for the evaluation of filarial viability	251
Research Notes		
M. F. Asanji and B. Fried	Excystation of five digenean metacercariae *in vitro* and in the peritoneal cavity of the mouse	257
P. M. Brophy, P. Crowley and J. Barrett	Relative distribution of glutathione transferase, glyoxalase I and glyoxalase II in helminths	259
T. K. Pahari and N. K. Sasmal	Experimental infection of mice with *Toxocara canis* larvae obtained from Japanese quails	263
S. Bretagne, F. Beaujean, A. Uner, S. Bresson-Hadni, M. Liance and R. Houin	Rapid technique for cryopreservation of *Echinococcus multilocularis* metacestodes	265

Number 3 May 1990

	Instructions to Contributors	i
	Parasitological Calendar	269
K. Rohde and N. Watson	Ultrastructural studies of juvenile *Austramphilina elongata*: scanning and transmission electron microscopy of the tegument	271

A. N. MacGregor and S. J. Shore	Immunocytochemistry of cytoskeletal proteins in adult *Schistosoma mansoni*	279
O. Berrada-Rkhami, R. Leducq, J. Gabrion and C. Gabrion	Selective distribution of sugars on the tegumental surface of adult *Bothriocephalus gregarius* (Cestoda: Pseudophyllidea)	285
C. H. Eisemann, L. A. Y. Johnston, M. Broadmeadow, B. M. O'Sullivan, R. A. Donaldson, R. D. Pearson, T. Vuocolo and J. D. Kerr	Acquired resistance of sheep to larvae of *Lucilia cuprina*, assessed *in vivo* and *in vitro*	299
F. R. Roubal and I. D. Whittington	Observations on the attachment by the monogenean, *Anoplodiscus australis*, to the caudal fin of *Acanthopagrus australis*	307
C. T. Wolmarans and E. Yssel	The granulocyte response of *Bulinus africanus* to infection with compatible and non-compatible trematode parasites	315
P. Upcroft, R. Mitchell and P. F. L. Boreham	DNA fingerprinting of the intestinal parasite *Giardia duodenalis* with the M13 phage genome	319
M. E. J. Woolhouse, S. K. Chandiwana and M. Bradley	On the distribution of schistosome infections among host snails	325
J. B. Williams	Ultrastructural studies on *Kronborgia* (Platyhelminthes: Fecampiidae): epidermis and subepidermal tissues of the parasitic male *K. isopodicola*	329
M. W. Kung'u and B. V. Goodger	A slide enzyme-linked immunosorbent assay (SELISA) for the diagnosis of *Babesia bovis* infections and for the screening of *Babesia*-specific monoclonal antibodies	341
R. J. Dobson, P. J. Waller and A. D. Donald	Population dynamics of *Trichostrongylus colubriformis* in sheep: the effect of infection rate on the establishment of infective larvae and parasite fecundity	347
R. J. Dobson, P. J. Waller and A. D. Donald	Population dynamics of *Trichostrongylus colubriformis* in sheep: the effect of host age on the establishment of infective larvae	353
R. J. Dobson, P. J. Waller and A. D. Donald	Population dynamics of *Trichostrongylus colubriformis* in sheep: the effect of infection rate on loss of adult parasites	359
R. J. Dobson, A. D. Donald, E. H. Barnes and P. J. Waller	Population dynamics of *Trichostrongylus colubriformis* in sheep: model to predict the worm population over time as a function of infection rate and host age	365
E. H. Barnes and R. J. Dobson	Population dynamics of *Trichostrongylus colubriformis* in sheep: mathematical model of worm fecundity	375
C. Northern and D. I. Grove	*Strongyloides stercoralis*: antigenic analysis of infective larvae and adult worms	381

A. I. Fasogbon, G. Knowles and P. R. Gardiner — A comparison of the isoenzymes of *Trypanosoma (Duttonella) vivax* isolates from East and West Africa — 389

Research Notes

M. A. Commins, B. V. Goodger, I. G. Wright and D. J. Waltisbuhl — *Babesia bovis*—effects of phospholipid translocation and adenosine tri-phosphate consumption — 395

M. E. Rottenberg, R. L. Cardoni and E. L. Segura — Involvement of L3T4$^+$, Lyt2.2$^+$ T cell subsets and non-T cells in the resistance of mice against *Trypanosoma cruzi* infection — 397

D. W. Featherston and C. N. Copeman — Mucosal mast cells in Sprague–Dawley rats infected with *Hymenolepis diminuta* tapeworms — 401

Meeting Reports

The Sixth International Conference of the Association of Institutes for Tropical Veterinary Medicine: Livestock Production and Diseases in the Tropics, Wageningen, The Netherlands, 28 August–1 September 1989 — 405

Sixth Symposium on Medical and Veterinary Acaroentomology, Gdansk, Poland, 18–20 September 1989 — 406

O-Now! Symposium on Onchocerciasis: Recent Developments and Prospects of Control, Institute for Tropical Medicine, Leiden, The Netherlands, 20–22 September 1989 — 406

Erratum — 409

Number 4 July 1990

Special Issue: Proceedings of the Silver Jubilee Scientific and General Meeting of the Australian Society for Parasitology

P. F. L. Boreham and R. E. Boreham — Preface — v

Silver Jubilee Lecture

J. D. Smyth — Parasitological serendipity: from *Schistocephalus* to *Echinococcus* — 411

The Bancroft-Mackerras Oration

A. M. Johnson — The Bancroft–Mackerras Oration: The changing face of science — 425

***Echinococcus* and Hydatidosis**

M. A. Gemmell — Australasian contributions to an understanding of the epidemiology and control of hydatid disease caused by *Echinococcus granulosus*—past, present and future — 431

R. C. A. Thompson and A. J. Lymbery — *Echinococcus*: biology and strain variation — 457

M. W. LIGHTOWLERS	Immunology and molecular biology of *Echinococcus* infections	471
Medical Parasitology—*Giardia*		
P. F. L. BOREHAM, J. A. UPCROFT and P. UPCROFT	Changing approaches to the study of *Giardia* epidemiology: 1681–2000	479
J. A. UPCROFT, P. UPCROFT and P. F. L. BOREHAM	Drug resistance in *Giardia intestinalis*	489
Medical Parasitology—Malaria		
K. N. MENDIS, P. H. DAVID and R. CARTER	Human immune responses against sexual stages of malaria parasites: considerations for malaria vaccines	497
A. F. COWMAN and S. J. FOOTE	Chemotherapy and drug resistance in malaria	503
Drugs and Resistance		
R. K. PRICHARD	Anthelmintic resistance in nematodes: extent, recent understanding and future directions for control and research	515
Arthropods and Arthropod-borne Diseases		
K. T. FRIEDHOFF	Interaction between parasite and tick vector	525
R. M. SANDEMAN	Prospects for the control of sheep blowfly strike by vaccination	537
Biological Control		
D. M. SPRATT	The role of helminths in the biological control of mammals	543
Aquatic Parasitology		
R. M. OVERSTREET	Antipodean aquaculture agents	551
K. ROHDE	Marine parasites: an Australian perspective	565

Number 5 August 1990

	Instructions to Contributors	i
	Parasitological Calendar	577
YU. G. EGOROV and G. A. KOSUPKO	Centenary Biographical Note: Boris Grigorievich Massino 1889–1956	579
General Papers		
I. BANKOV and J. BARRETT	Sphingomyelin synthesis in *Fasciola hepatica*	581
S. W. DAVIS and B. HAMMERBERG	*Taenia taeniaeformis*: evasion of complement-mediated lysis by early larval stages following activation of the alternative pathway	587
S. W. DAVIS and B. HAMMERBERG	Effect of depletion of L3T4+ cells on resistance to early primary infection of mice with *Taenia taeniaeformis*	595

S. Lombardi, M. Vegni-Talluri, L. Banchieri and F. Esposito	The *in vitro* adherence of murine eosinophils, neutrophils and non-induced and induced macrophages to infective larvae of *Toxocara canis* (Nematoda, Ascarididae)	603
T. Ono and T. Nakabayashi	Gametocytogenesis induction by ammonium compounds in cultured *Plasmodium falciparum*	615
A. F. Bird	Vital staining of glycoprotein secreted by infective third stage larvae of *Haemonchus contortus* prior to exsheathment	619
P. W. N. Kanyari	*Eimeria apsheronica* in the goat: endogenous development and host cellular response	625
D. B. Adams	Infection of immunosuppressed mice with the abomasal nematode parasite of ruminants, *Haemonchus contortus*	631
F. Renaud, A. Blanquer and C. Gabrion	Genetic divergence in *Bothriocephalus gregarius*: a hypothesis based on the paleogeographic movements of their teleost (*Psetta*) hosts	637
R. Leducq, O. Berrada-Rkhami, J. Gabrion and C. Gabrion	Lectin analysis of glycoconjugate distribution during differentiation and strobilization of *Bothriocephalus gregarius* metacestode in a paratenic host	645
E. B. T. Steeves and J. R. Allen	Basophils in skin reactions of mast cell-deficient mice infested with *Dermacentor variabilis*	655
G. F. J. Newlands, A. MacKellar and H. R. P. Miller	Intestinal mucosal mast cells in *Nippostrongylus*-infected mice: lack of sensitivity to corticosteroids	669
Research Notes		
A. Osuna, S. Castanys, M. N. Rodriguez-Cabezas and F. Gamarro	*Trypanosoma cruzi*: calcium ion movement during internalization in host HeLa cells	673
J. Y. M. Wong, J. H. Dufty and J. P. Opdebeeck	The expression of bovine lymphocyte antigen and response of Hereford cattle to vaccination against *Boophilus microplus*	677
X. Hua, H. Sugaya and K. Yoshimura	Alteration in density of eosinophils in the cerebrospinal fluid of mice infected with *Angiostrongylus cantonensis*	681
B. V. Goodger, M. A. Commins, D. J. Waltisbuhl, I. G. Wright and K. Rode-Bramanis	*Babesia bovis*: immunity induced by vaccination with a lipid enriched fraction	685
H. Sato and M. Kamiya	Extraintestinal strobilar development of immature *Echinococcus multilocularis* in laboratory rodents following intratracheal inoculation of the protoscoleces	689
C. Klaver and W. Böhme	Clarification of the taxonomic status of a host of two new *Plasmodium* species	693
W. M. Boyce and C. H. Courtney	Seasonal transmission of *Fasciola hepatica* in north central Florida (U.S.A.)	695

P. J. SCHOFIELD, M. COSTELLO, M. R. EDWARDS and W. J. O'SULLIVAN	The arginine dihydrolase pathway is present in *Giardia intestinalis*	697
P. J. SCHOFIELD, P. KRANZ and M. R. EDWARDS	Does *Giardia intestinalis* need glucose as an energy source?	701
E. A. MILBOURNE and M. J. HOWELL	Eosinophil responses to *Fasciola hepatica* in rodents	705
Software Survey		
D. A. WHARTON	The use of computer-aided learning for teaching parasite life cycles	709
Book Review		
M. W. LIGHTOWLERS	*The Physiology and Biochemistry of Cestodes* by J. D. Smyth and D. P. McManus	713
Meeting Report	Australian Society for Parasitology Silver Jubilee Meeting, Held Jointly with the New Zealand Society for Parasitology, Townsville, Queensland, Australia, 26–29 September 1989	715

Number 6 October 1990

	Instructions to Contributors	i
	Parasitological Calendar	717
K. ROHDE	Zbigniew Kabata: An appreciation	719
B. FRIED	Points in Question	721
D. P. MCMANUS	Points in Question: Genetic diversity in *Echinococcus granulosus*	723
General Papers		
R. CHANDRASHEKAR, U. R. RAO and D. SUBRAHMANYAM	Antibody-mediated cytotoxic effects *in vitro* and *in vivo* of rat cells on infective larvae of *Brugia malayi*	725
R. E. B. HANNA and W. A. NIZAMI	*Isoparorchis hypselobagri*: ultrastructure of the tegument and associated tissues in a digenean inhabiting a gaseous aerobic environment	731
A. A. KHIDR	Population dynamics of *Enterogyrus cichlidarum* (Monogenea: Ancyrocephalinae) from the stomach of *Tilapia* spp. in Egypt	741
T. TAPPENDEN and G. C. KEARN	Spermiogenesis and sperm ultrastructure in the monogenean parasite *Acanthocotyle lobianchi*	747
L. N. MEASURES, M. BEVERLEY-BURTON and A. WILLIAMS	Three new species of *Monocotyle* (Monogenea: Monocotylidae) from the stingray, *Himantura uarnak* (Rajiformes; Dasyatidae) from the Great Barrier Reef: phylogenetic reconstruction, systematics and emended diagnoses	755

A. Williams and R. C. Lethbridge	The subcutaneous attachment of the monogenean *Heterobothrium elongatum* (Diclidophoridae) in the gills of *Torquigener pleurogramma* (Pisces: Tetraodontidae)	769
D. van Waerebeke, N. Noury-Sraïri and J.-L. Justine	Spermatozoa of rhigonematid nematodes: morphology of 25 species and ultrastructure of *Rhigonema madecassum*	779
L. Basson, J. G. Van As and L. Fishelson	A new species of *Trichodina* (Ciliophora: Peritrichia) from the intestine of the surgeonfish *Acanthurus xanthopterus*	785
T. H. Cribb	Introduction of a *Brachylaima* species (Digenea: Brachylaimidae) to Australia	789
S. E. Nott, W. J. O'Sullivan, A. M. Gero and A. S. Bagnara	Routine screening for potential babesicides using cultures of *Babesia bovis*	797
J. B. Williams	Ultrastructural studies on *Kronborgia* (Platyhelminthes: Fecampiidae): subepidermal glands of the female *K. isopodicola*	803
Research Note		
B. F. F. Chumpitazi, J.-C. Renversez, F. Peyron, C. Boudin, S. Picot and P. Ambroise-Thomas	Correlation between β_2-microglobulin and soluble interleukin-2 receptor levels in plasma of individuals living in a malarial endemic region	815
	Corrigendum	819

Number 7 November 1990

	Instructions to Contributors	i
	Parasitological Calendar	821
E. H. Barnes and R. J. Dobson	Population dynamics of *Trichostrongylus colubriformis* in sheep: computer model to simulate grazing systems and the evolution of anthelmintic resistance	823
J. A. Roberts	The life cycle of *Toxocara vitulorum* in Asian buffalo (*Bubalus bubalis*)	833
E. M. Bennet, C. A. Behm and C. Bryant	The role of the host in the regulation of end-product formation in two strains of the rat tapeworm, *Hymenolepis diminuta*	841
M. W. Gregory and J. Catchpole	Ovine coccidiosis: the pathology of *Eimeria crandallis* infection	849
N. Abdelmeguid	Effect of acrylamide toxicity on the ultrastructure of a single cell model *Nyctotheroides puytoraci*	861
P. J. Martin and J. A. McKenzie	Levamisole resistance in *Trichostrongylus colubriformis*: a sex-linked recessive character	867

A. Agarwal, O. P. Shukla, S. Ghatak and B. L. Tekwani	Biogenic amines, metabolites and monoamine oxidase in the filarial worm *Setaria cervi*	873
M. Bristovetzky and I. Paperna	Life cycle and transmission of *Schellackia cf. agamae*, a parasite of the starred lizard *Agama stellio*	883
A. A. Ariyo and J. P. O. Oyerinde	Effect of ultraviolet radiation on survival, infectivity and maturation of *Schistosoma mansoni* cercariae	893
F. Parrodi, I. G. Wright, J. D. Kerr and C. Dobson	*In vitro* adherence of erythrocytes infected with *Babesia bigemina* and *Babesia rodhaini* to thrombospondin	899
J. Andreassen, D. Hoole and D. Befus	Complement-mediated leucocyte adherence to newly excysted and 4-day-old *Hymenolepis diminuta*	905
G. Smith	A mathematical model for the evolution of anthelmintic resistance in a direct life cycle nematode parasite	913
T. M. Goater, C. L. Brcwne and G. W. Esch	On the life history and functional morphology of *Halipegus occidualis* (Trematoda: Hemiuridae), with emphasis on the cystophorous cercaria stage	923
P. E. Simonsen, B. J. Vennervald and A. Birch-Andersen	*Echinostoma caproni* in mice: ultrastructural studies on the formation of immune complexes on the surface of an intestinal trematode	935
R. B. Gasser, M. W. Lightowlers and M. D. Rickard	A recombinant antigen with potential for serodiagnosis of *Echinococcus granulosus* infection in dogs	943
M. Owhashi, Y. Horii, T. Ikeda, S. Tsukidate, K. Fujita and Y. Nawa	Non-specific immune suppression by $CD8^+$ T cells in *Brugia pahangi*-infected rats	951
J. B. Williams	Ultrastructural studies on *Kronborgia* (Platyhelminthes: Fecampiidae): observations on the genital system of the female *K. isopodicola*	957
Research Notes		
F. J. Kruger and P. H. Joubert	Scanning electron microscopical observations on the shedding of the tegument of adult *Schistosoma mattheei*	965
D. P. Banerjee, R. R. Momin and S. Samantaray	Immunization of cattle (*Bos indicus* × *Bos taurus*) against *Hyalomma anatolicum anatolicum* using antigens derived from tick salivary gland extracts	969
Book Review		
D. P. McManus	*Current Concepts in Parasitology*, edited by R. C. Ko	973
Number 8		December 1990
	Instructions to Contributors	i
	Parasitological Calendar	975
R. S. Bray	Obituary: Leonard Bruce-Chwatt, 1907–1989	977
Invited Review Article		
K. Rohde	Phylogeny of Platyhelminthes, with special reference to parasitic groups	979

General Papers

J. A. Etchegoin and N. H. Sardella — Some ecological aspects of the copepod parasites of the common hake, *Merluccius hubbsi*, from the Argentine–Uruguayan coasts — 1009

R. R. Woolaston, I. A. Barger and L. R. Piper — Response to helminth infection of sheep selected for resistance to *Haemonchus contortus* — 1015

R. M. Sandeman, J. P. Feehan, R. A. Chandler and V. M. Bowles — Tryptic and chymotryptic proteases released by larvae of the blowfly, *Lucilia cuprina* — 1019

Y. Sato, H. Toma, M. Takara and Y. Shiroma — Application of enzyme-linked immunosorbent assay for mass examination of strongyloidiasis in Okinawa, Japan — 1025

V. H. Suarez — Inhibition patterns and seasonal availability of nematodes for beef cattle grazing on Argentina's Western Pampas — 1031

K. A. Keith, M. C. Duncan, M. Murray, K. Bairden and A. Tait — Stage-specific cuticular proteins of *Ostertagia circumcincta* and *Ostertagia ostertagi* — 1037

A. Canals and L. C. Gasbarre — *Ostertagia ostertagi*: isolation and partial characterization of somatic and metabolic antigens — 1047

N. A. Samarawickrema and M. J. Howell — The surface coat of bloodstream forms of *Trypanosoma musculi* from mice — 1055

S. Chandra, G. P. Agarwal, S. P. N. Singh and A. K. Saxena — Seasonal changes in a population of *Menacanthus eurysternus* (Mallophaga, Amblycera) on the common myna *Acridotheres tristis* — 1063

J. W. Steel, W. O. Jones and B. M. Wagland — The response of immune sheep to challenge with *Trichostrongylus colubriformis*: enteric plasma loss and secretion of biogenic amines — 1067

W. O. Jones, R. G. Windon, J. W. Steel and P. M. Outteridge — Histamine and leukotriene concentrations in duodenal tissue and mucus of lambs selected for high and low responsiveness to vaccination and challenge with *Trichostrongylus colubriformis* — 1075

S. C. Barker and R. L. Close — Zoogeography and host associations of the *Heterodoxus octoseriatus* group and *H. ampullatus* (Phthiraptera: Boopiidae) from rock-wallabies (Marsupialia: *Petrogale*) — 1081

Research Notes

T. L. W. Rothwell and R. G. Windon — Failure of low level γ-irradiation of infective larvae to influence establishment or expulsion of *Trichostrongylus colubriformis* in guinea pigs — 1089

M. D. Maloney, L. H. Semprevivo and G. C. Coles — A comparison of the glycolipid compositions of cercarial and adult *Schistosoma mansoni* and their associated hosts — 1091

A. Saul, P. Graves and L. Edser — Refractoriness of erythrocytes infected with *Plasmodium falciparum* gametocytes to lysis by sorbitol — 1095

U. R. Rao, R. C. Lowrie, Jr, A. C. Vickery, B. H. Kwa and J. K. Nayar	A direct fluorescence technique for the rapid detection of sheathed microfilariae in blood smears	1099
F. J. Kruger and P. H. Joubert	Adherence of blood platelets and leucocytes to hybrid schistosomes	1105
F. Esposito, A. M. Santroni, A. Habluetzel, V. Grelloni, A. Pessi, S. Lombardi, G. Falcioni and M. Brunori	Intraerythrocytic administration of a synthetic *Plasmodium* antigen elicits antibody response in mice, without carrier molecules or adjuvants	1109
M. Haque, A. H. Siddiqi and J. Siddiqui	Lactate dehydrogenase in two digenetic trematodes and their host	1113
	Meeting Reports	1117
	Volume Contents, Author Index and Key Word Index for Volume 20, 1990	i